REMARKS

This Amendment is responsive to the Office Action mailed December 24, 2008. After its entry, claims 1-17 are pending in this application and subject to examination. Claim 5 is amended. Support for this amendment is found in the specification at page 6, line 28. No new matter is added.

Reconsideration of the application as amended is respectfully requested in view of the following remarks.

Objection to Claim 5

Claim 5 stands objected to under 37 C.F.R. § 1.75(c) as being in improper dependent form for failing to further limit the subject matter of claim 1, from which it depends. Applicants have amended claim 5 to recite "an aromatic or ***heteroaromatic*** ring system" to render it consistent with the definition of "Aryl" in claim 1. Applicants believe this amendment obviates this objection and respectfully request its withdrawal.

Rejection Under 35 U.S.C. § 103(a)

Claims 1-10 and 12-17 stand rejected as obvious over U.S Patent No. 6,097,147 to Baldo et al. (Baldo) in view of U.S. Patent App. Pub. No. 2002/0122900 to Ueda et al. (Ueda). Claims 11, 15, and 16 stand rejected as obvious over Baldo in view of Ueda and further in view of U.S. Patent App. Pub. No. 2001/0000943 A1 to Fukuoka et al. (Fukuoka). Claim 17 stands rejected as obvious over Baldo in view of Ueda and further in view of U.S. Patent. No. 6,299,796 B1 to Igarashi (Igarashi). Applicants respectfully traverse.

Claims 1-10 and 12-17

Applicants submit that claims 1-10 and 12-17 are non-obvious over the combined teachings of Baldo and Ueda because (1) the skilled artisan would have no motivation to select the spirobifluorenes of Ueda for use in the hole blocking layers of Baldo over any other compound capable of being used in this manner and (2) the organic electroluminescent devices

of these claims possess unexpectedly longer lifetimes compared to devices where the hole blocking layer does not comprise a compound of formula (I).

Baldo discloses light emitting devices comprising a substantially transparent anode; a hole transporting layer over the anode; an emission layer over the hole transporting layer; a blocking layer over the emission layer; an electron transporting layer over the blocking layer; and a cathode in electrical contact with the electron transporting layer. Column 3, lines 22-25 of Baldo. Baldo also discloses that the exciton blocking layer must be made from a material having a larger band gap than the energy level of the excitons formed in the emission layer. Column 4, lines 25-27 of Baldo. In other words, when the material of the blocking layer has a larger band gap than the energy level of the excitons formed in the emission layer, the excitons cannot migrate into this layer and, thus, are blocked. The only materials specifically disclosed by Baldo as suitable for use in its blocking layers are NPD, CBP, BCP, and Alq_3. Column 4, lines 27-29 of Baldo. Applicants have informed that undersigned that, of these specifically disclosed materials, ***only BCP can be used as a hole blocking material*** due to its suitable bandgap and HOMO level. Furthermore, Applicants have informed the undersgined that CBP and NPD are known in the art as good hole transporting compounds and, thus, cannot act as hole blocking materials.

As acknowledged by the Examiner, Baldo neither teaches nor suggests the use of a compound of formula (1) in its blocking layer. The only requirement imposed by Baldo is that its blocking layer must be made from a material having a larger band gap than the energy level of the excitons formed in the emission layer. As such, Baldo fails to motivate the skilled artisan to select any particular material for use in its hole blocking layer, just as long as it meets this requirement. Applicants have informed the undersigned that an enormous variety of compounds capable of meeting the bandgap requirement of Baldo exist. As such, the Examiner's selection of the spirobifluorenes of Ueda on the ground that the skilled artisan would be motivated "by a desire to optimize the hole-blocking layer in a device" is the result of an improper, hindsight-based reconstruction of Applicants' claimed organic electroluminescent devices. The Examiner

provides no particular reason for selecting the Ueda compounds for use in the hole blocking layer of the Baldo devices over any other material that could be used.

Furthermore, the use of compounds of formula (1) in the blocking layer of the claimed organic electroluminescent devices unexpectedly results in a device having a considerably longer operational lifetime, particularly when no separate electron transporting layer is used. Table 1 on page 11 of the present application demonstrates that the lifetime of organic electroluminescent devices comprising compounds of formula (1) (Examples 4b and 4a) is 81 to 153 % higher than that of an organic electroluminescent device comprising ***BCP*** as the blocking material (Example 4d). Furthermore, the lifetime of an organic electroluminescent device comprising a compound of formula (1) (Example 5a) is 625 % higher than that of an organic electroluminescent device comprising ***BCP*** as the blocking material (Example 5c) when no separate electron transporting layer is present. Ueda neither teaches nor suggests that the incorporation of its spirobifluorene compounds in the light emitting devices of Baldo would result in a device with an increased lifetime. As such, the longer operational lifetime of the presently claimed organic electroluminescent devices is an unexpected improvement.

In view of the remarks *supra*, Applicants submit that claims 1-10 and 12-17 are non-obvious over the combined teachings of Baldo and Ueda and respectfully request withdrawal of this rejection.

Claims 11, 15, and 16

The remarks *supra* regarding claims 1-10 and 12-17 are incorporated herein by reference in their entirety. Applicants submit that claims 11, 15, and 16 are non-obvious over the combined teachings of Baldo, Ueda, and Fukuoka for the same reasons that claims 1-10 and 12-17 are non-obvious over the combined teachings of Baldo and Ueda. As such, Applicants respectfully request withdrawal of this rejection.

Claim 17

The remarks *supra* regarding claims 1-10 and 12-17 are incorporated herein by reference in their entirety. Applicants submit that claim 7 is non-obvious over the combined teachings of Baldo, Ueda, and Igaradhi for the same reasons that claims 1-10 and 12-17 are non-obvious over the combined teachings of Baldo and Ueda. As such, Applicants respectfully request withdrawal of this rejection.

In view of the foregoing amendment and remarks, Applicants believe the pending application is in condition for allowance.

Applicants believe no fee is due with this amendment. However, if a fee is due, the Director is hereby authorized to charge our Deposit Account No. 03-2775, under Order No. 14113-00141-US, from which the undersigned is authorized to draw.

Dated: March 24, 2009

Respectfully submitted,

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